

## An investigation of Significant Gender Differences on Indigenous and Cattellian Personality Factors

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The present study was aimed to investigate the significant gender differences on eight Indigenous and 16 Cattellian Personality Factors. As gender is one of the concerns in personality research the literature review confirms the significant gender differences in various cultures. To realize the main objective of the study, 16 PF-Fifth Edition and Indigenous Personality Questionnaire are administered on 246 participants (176 females & 79 males). The age ranged between 18 to 30 years with a mean age of 24.45 years and SD of 3.16 years. Only volunteer participants participated in the study. The obtained data was analyzed by applying Mean, SD, and t-ratios with the help of SPSS. Results revealed that in case of Indigenous Personality Factors, females scored significantly lower on Impulsivity ( $t=-5.880<.000$ ) and Hostility ( $t=-2.231<.027$ ) which depicts that males would be high on Impulsivity (lack of decision, impatience, stubborn, confused, rigidity) and Hostility (loveless, vindictive, antisocial, thoughtlessness). Significant gender differences were not found in Anxiety, Activity, Introversion, Religiosity, Luxurious and Kindness factors. In case of Cattellian Personality Factors, females did high scores on Sensitivity ( $t=7.653p<.000$ ), Vigilance ( $t=2.357p<.020$ ), Apprehension ( $t=2.497p<.013$ ) and Perfectionism ( $t=2.722p<.007$ ), and low on Abstractedness ( $t=-2.637p<.009$ ) as compared to males. There were no significant gender differences in the remaining Cattellian Factors. Previous research also supports the findings of the present study. Although, a large sample would be required for more confirmation.

**Keywords:** Gender, Indigenous Personality Factors, Cattellian Personality Factors, 16 PF-Fifth Edition

Literature review has been addressing various research issues in the domain of personality psychology. Corr and Matthews (2009), in their popular book mentioned research issues of personality in terms of nomothetic v/s ideographic, person-situation controversy, conscious v/s unconscious, brain functioning v/s social learning and context, individual's DNA v/s environmental factors, and stability throughout adulthood v/s change over time. Another issue i.e., emergence of personality structure in different traditions/thoughts of eastern and western perspectives has been also studied by psychologists across the globe. Eastern perspective includes Hinduism, Confucianism, Taoism, Buddhism, and Jainism. In contrast, western perspective includes Athenian, Judeo-Christian, and Islam. Despite these two broad perspectives, more specifically diverse cultures, societies, customs, beliefs, and groups etc.

also influence the personality make up of an individual.

Trait models claim the comprehensive description and assessment of personality, and various factor analytic based instruments are developed to assess personality considering the distinct cultures, ages, gender etc. Questionnaires based on Cattellian, Eysenckian, and Big Five systems are popular and useful particularly for normal personality traits. Indian literature suggests the domain of personality exclusively mentioned in different thoughts and not studied in an explicit way. Indian thoughts include Vedanta, Mimansa, Samkhya, Yoga, Nyaya, Charvak, Buddhism, Jainism, Ayurveda etc., and all are quite diverse in their orientation, and manifested their subsystems which influence individual's goal of life, nature of cognitive and affective processes, and mental health (Baron

and Misra, 2000). Based on Indian literature, Triguna (Rajas, Tamas, Satvik) and Tridosha (Vatta, Pitta, Kapha) models are extremely popular. Indigenous Personality Questionnaire (Anupam, 2023) which is based on pool of personality descriptors from various Indian thoughts was used in the present research along with 16 PF-Fifth Edition.

Gender may be considered one of the crucial issues in the personality domain. Recently, Stake and Eisele (2015) discussed limitations of personality psychology which deal in the role of gender in personality profile. They opined that there is a significant scarcity of gender specific theories, and most of the researchers are in favor of self-report inventories where data sets are affected by response set and social expectations. Studies are reviewed on various global perspectives regarding personality and gender differences (Schmitt et al. (2017)). They stated that gender differences in personality traits are studied and discussed in terms of perceived gender roles, gender socialization and sociostructurally power differences. It depicted that smaller gender differences exist in the cultures where gender roles are not fixed as compared to those cultures in which gender roles are defined, and findings also supported the assumption. In this view, social obligations and roles may also interplay the manifestations of personality traits.

Results from four meta-analyses showed that males scored higher on measures of assertive and self-esteem, whereas females found higher on measures of extraversion, anxiety, trust, and tendermindedness; measures related to social anxiety, impulsiveness, activity, ideas, locus of control and orderliness are not showed significant gender differences (Feingold, 1994). Costa and his colleagues (2001) reported the results from data set of 32 cultures, and found that females were higher on Neuroticism, Agreeableness, Warmth, and Openness to Feelings, whereas men were higher on Assertiveness and Openness to Ideas. Although, magnitude of differences varied from culture to culture.

Booth and Irwing (2011) studied the gender differences on 16 Cattellian Factors and found that females are significantly higher

on Sensitivity ( $d=-2.29$ ), Warmth ( $d=-.89$ ), and Apprehension ( $d=-.60$ ), whereas males scored higher on Emotional Stability ( $d=.53$ ), Dominance ( $d=.54$ ) and Vigilance ( $d=.36$ ). In one study it was found that females are high on Extraversion ( $d=.08$ ), Agreeableness ( $d=0.48$ ) and Neuroticism ( $d=.39$ ) (Weisberg et al., 2011). Vianello and colleagues (2013) investigated the gender differences in terms of explicit and implicit personality traits. They observed that females showed high scores on factors of Agreeableness, Conscientiousness, Extraversion and Neuroticism, although in case of implicit data results are found inversely for Extraversion factor. Rahmani and Lavasani (2012) examined the significant gender differences in five factors of personality and facets of sensation seeking. Results revealed that girls scored higher on openness to experience, and agreeableness as compared to boys. In case of sensation seeking scales such as thrill and adventure seeking, disinhibition and boredom susceptibility boys obtained high scores as compared to their counterpart.

Lynn and Martin (2010) examined the gender differences on three broad factors-Extraversion, Neuroticism, and Psychoticism considering the data from 37 countries, results revealed that women were found higher on Neuroticism in all countries whereas men obtained higher mean values on Extraversion (30 countries) and Psychoticism (34 countries). Khanna and colleagues (2013) investigated the gender differences on Triguna (three qualities) model of personality and results revealed that males are found higher on Rajas quality ( $t=4.02p<.01$ ) when compared to females.

In 2021, Gupta studied the gender differences on five factors of personality, and results revealed that males are found high on Neuroticism ( $t=2.110p<.036$ ) and Openness to Experience ( $r=2.047p<.042$ ), whereas females were found high on Extraversion ( $t=2.059p<.041$ ). Recently, Furnham and Treglown (2023) explored significant sex differences on various measures of personality tests such as Myers-Briggs Type Indicator, NEO-PI-R, Hogan Personality Indicator, Motives and Values Preferences Indicator, Hogan Development Survey, and High Potential Trait Indicator.

Findings also support the significant gender differences but with small significant level.

In this view, numerous studies show the inconsistencies in several personality traits. Therefore, the present research is also designed to explore the significant gender differences in Cattellian and Indigenous Personality Traits. Cattellian 16 PF and Indigenous Personality Questionnaire are used to assess personality traits.

### **Objectives**

- Examination of significant gender differences on Cattellian Personality Factors.
- To study significant gender differences on Indigenous Personality Factors.

### **Method**

#### **Participants:**

Total 246 participants (176 females & 79 males) participated in the study. The participants for the present study were drawn from various departments/institutions of colleges and universities of Haryana. Bilingual (English and Hindi) students of different streams such as arts, humanities, sciences, social sciences, engineering etc. took part in the study. The age of participants (total sample) ranged between 18 to 30 years with the mean age of 24.45 years and SD of 3.16 years. Only those participants participated who gave their written consent.

Following measures are used for data collection:

*Indigenous Personality Questionnaire (Anupho am, 2023):* It includes total 89 dichotomous items which are distributed among eight factors. Factors are explained in terms of Anxiety, Activity, Impulsivity, Introversion, Religiosity, Luxurious, Hostility, and Kindness. Cronbach alpha coefficients ranged from .82 to .42 for all factors. Construct validity is ensured in terms of eight factor solution. Convergent and Discriminant validities are calculated with Cattellian 16 personality factors.

*Sixteen Personality Factor Questionnaire-Fifth Edition (Russell and Karol, 2002):* The Sixteen Personality Factor Questionnaire by Raymond Cattell assesses the primary

components of personality which emerged in factor analyses of English language adjectives (Lexicon Personality Sphere). The 16 PF Fifth Edition is a revised and updated form of earlier 16 PF which measures the same 16 primary personality factor scales identified by Cattell over 78 years ago. It includes a total of 185 items and can be administered in a group of 20-30 participants. The 16 personality factors are Warmth (A), Reasoning (B), Emotional Stability (C), Dominance (E), Lively (F), Rule-Conscious, (G), Socially Bold (H), Sensitivity (I), Vigilance (L), Abstractedness (M), Privatness (N), Apprehension (O), Open to Change (Q1), Self-Reliant (Q2), Perfectionistic (Q3), and Tension (Q4). Five global factors are also extracted at second order level. Good psychometric properties have been ascertained in many studies across culture, gender, age etc.

#### **Administration and Procedure**

All participants were acquainted with the purpose of the study and asked for their consent as well. Testing phase was completed in two sessions, Indigenous Personality Questionnaire and 16 PF-Fifth Edition were administered in first and second sessions, respectively. Questionnaires were administered in group settings having 15-25 students in each group. Instructions were strictly followed in view of ethics of testing. After administering the questionnaires, scoring was done at the factor level. Obtained data was analyzed by applying appropriate statistical techniques through the latest version of SPSS.

### **Results**

Obtained data was analyzed by applying Mean, SD, and t-ratio, and reported in Table-1. Total 24 personality factors (08 from Indigenous Personality Questionnaire & 16 from 16 PF-Fifth Edition) are used to see significant gender differences and discussed section wise.

Significant Gender Differences on Factors of Indigenous Personality Questionnaire.

A total of two factors were found where significant gender differences were obtained. Females scored significantly lower on Impulsivity ( $t=-5.880p<.000$ ) and Hostility ( $t=-2.231p<.027$ ) factors of Indigenous Personality Questionnaire as compared to males.

**Table-1. Gender Differences on Measures of Indigenous Personality Questionnaire and 16 PF-Fifth Edition**

Variables	Gender	N	Mean	SD	t-values	Sig.
Anxiety	Female	167	9.479	3.165	-1.338	.182
	Male	79	10.075	3.470		
Activity	Female	167	6.688	3.888	-.063	.950
	Male	79	6.721	3.741		
Impulsivity	Female	167	6.485	3.241	-5.880	.000
	Male	79	9.101	3.295		
Introversion	Female	167	4.509	2.507	-.942	.347
	Male	79	4.822	2.291		
Religiosity	Female	167	5.712	2.849	-1.091	.276
	Male	79	6.126	2.618		
Luxurious	Female	167	4.904	2.060	-.471	.638
	Male	79	5.038	2.120		
Hostility	Female	167	1.766	1.330	-2.231	.027
	Male	79	2.164	1.255		
Kindness	Female	167	3.664	1.716	1.726	.086
	Male	79	3.253	1.807		
Warmth	Female	167	13.706	3.064	.880	.380
	Male	79	13.329	3.300		
Reasoning	Female	167	7.622	2.492	-1.249	.213
	Male	79	8.075	2.977		
Emotional Stability	Female	167	11.658	4.105	-.728	.467
	Male	79	12.063	3.991		
Dominance	Female	167	12.880	3.520	-.406	.685
	Male	79	13.075	3.543		
Lively	Female	167	12.239	3.450	1.523	.129
	Male	79	11.493	3.862		
Rule-Conscious	Female	167	11.065	3.296	-1.577	.116
	Male	79	11.797	3.599		
Socially Bold	Female	167	10.065	5.029	.077	.939
	Male	79	10.012	5.125		
Sensitivity	Female	167	13.766	3.425	7.653	.000
	Male	79	10.379	2.807		
Vigilance	Female	167	13.449	3.212	2.351	.020
	Male	79	12.443	2.960		
Abstractedness	Female	167	8.532	3.697	-2.637	.009
	Male	79	9.898	3.989		

Privateness	Female	167	11.437	3.662	.923	.357
	Male	79	10.987	3.353		
Apprehension	Female	167	11.083	4.559	2.497	.013
	Male	79	9.569	4.174		
Open to Change	Female	167	17.449	3.771	1.552	.122
	Male	79	16.645	3.833		
Self-Reliant	Female	167	9.544	4.128	1.254	.211
	Male	79	8.873	3.435		
Perfectionistic	Female	167	13.766	3.150	2.722	.007
	Male	79	12.582	3.260		
Tension	Female	167	9.928	3.771	1.549	.123
	Male	79	9.1392	3.636		

#### Significant Gender Differences on Factors of 16 PF-Fifth Edition

Regarding factors of 16 PF-Fifth Edition, females scored significantly high on Sensitivity ( $t=7.653p<.000$ ) as compared to males. Females also had a significantly higher score on Vigilance Factor ( $t=2.351<.020$ ) as compared to their male counterpart. In case of Apprehension Factor, females obtained a higher mean score as compared to males which is found significant at .013 ( $t=2.497$ ) level of probability. Perfectionistic Factor also showed the significant mean differences ( $t=2.722p<.007$ ) where females are found to score higher when compared to males. Whereas males are found high on Abstractedness ( $t=2.637p<.009$ ) as compared to their female counterpart.

#### Discussion

The present research elucidated significant gender differences on measures of Indigenous Personality Questionnaire and 16 PF-Fifth Edition. Results showed that females would be low on Impulsivity Factor. It depicts that males tend to be high on characteristics of Impulsivity such as lack of decision, impatience, stubborn, confused, and rigidity. Males were also found high on Hostility which reveals that they tend to be high on lovelessness, vindictiveness, antisocial and thoughtlessness. Characteristics of Impulsivity and Hostility are explored in the development of Indigenous Personality Questionnaire. Avdikou and colleagues (2019) did not report any gender differences in hostility among the participants of caregivers. Whereas in

another study, men were found significantly high on trait hostility, but no significant differences were observed in state hostility (Fava et al., 1995).

In case of Cattellian personality factors, females were found high on Sensitivity. It depicts females show interests for personal tastes and aesthetic values; they will be more empathetic and sensitive. In contrast, males may focus on objectivity and utility of things, they may exclude the feelings and actions of people. Russell and Karol (2022) also reported the significant gender differences on Sensitivity Factor and found that females are high on this factor.

Females reported themselves high on Vigilance factor. Here, high scores indicate that people may remain vigilant about others' actions and intentions. They may misunderstand and have a sense of separateness from others. Low scores may define in terms of having the characteristics of trust. People may show loyalty and good intentions towards others. Booth and Irwing (2011) also reported the high scores of females on Vigilance Factor.

Females' scores were found high on Apprehension. People who obtained high scores tend to be high on feelings of apprehensiveness and insecurity, they may anticipate dangers in different situations. People who obtain low scores would be self-assured, more confident, and self-satisfied.



Females also obtained high scores on Perfectionistic Factor. High scores mean people would be organized, and they may keep things in appropriate places and will make plans for all activities. Inversely, low score indicates that people would be disorganized.

Inversely, males scored high on Abstractedness Factor. Here high scores mean people would pay more attention to their internal thought processes rather than outer realities. People who get low scores would be high on grounded realities and they believe in observable facts.

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